

REMARKS

This amendment is submitted in response to the Examiner's Action dated August 23, 2005. Applicants have amended the claims to more clearly recite features presented therein. No new matter has been added, and the amendments place the claims in better condition for allowance. Applicants respectfully request entry of the amendments to the claims. The discussion/arguments provided below reference the claims in their amended form.

CLAIMS REJECTIONS UNDER 35 U.S.C. § 112

In the present Office Action, Claims 1, 9 and 10 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants have amended the claim to more clearly define the subject matter of these claims. The amendments overcome the §112 rejection, and Applicants respectfully request reconsideration of the rejection in light of the amendment.

CLAIM REJECTIONS UNDER 35 U.S.C. § 103

In the present Office Action, Claims 1-3 and 5-13 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Chiussi, et al.* (U.S. Patent No. 6,396,843) in view of *Hughes, et al.* (U.S. Patent No. 5,835,494). The combination of these references does not render Applicants' claims unpatentable because the combination does not suggest key features recited by Applicants' claims, and those features would not have been obvious to one skilled in the art at the time of Applicants' invention.

As recited by the newly amended independent Claims 1 and 9, Applicants' invention provides the following features (among others):

a mechanism for determining when a flow is added to the source whether that source was at a first location in the time-based calendar and then (1) preventing the source from being placed at a second location that is ahead of a previously-calculated location in the time-based calendar and (2) placing the source at a third location that is one of the previously-calculated location or a next location that is after the previously-calculated location within the time-based calendar, regardless of which position a time pointer is currently pointing to.

Applicants first incorporate by reference the arguments proffered in Amendment B. As applied to the newly-amended claim features and original claim features, none of the cited sections of *Chiussi* teach or suggest these features. *Chiussi* generally provides a "Logarithmic

Calendar Queue (LCQ)" that sorts "timestamps in order to select the packet with minimum timestamp for transmissions" in "a GPS-related scheduler" (Abstract). *Chiussi* does not teach or suggest ordering and/or re-ordering of multiple queues within a calendar, where a mechanism determines subsequent queue positions within the calendar and places the queue at or after a pre-calculated location/position within the time calendar regardless of which position the time pointer is currently pointing to.

The cited sections of *Chiussi* do not provide any teaching or suggestion of the recited claim features. For example, Col. 4, lines 37-45 discusses "MD-SCFQ achieves optimal delay bounds" and "using the system-potential function of MDSCFQ." Col. 5, lines 17-30 describes ordering bins based on position within memory, with each bin storing an associated timestamp. Col. 10, lines 50-53 provides a "network connection is established from each of the data sources ... and data packets are transmitted..." Finally, col. 15, lines 53-65 describes "receiving a plurality of data packets" and "storing ... packets in one of said plurality of queues."

Examiner recognizes and admits that "*Chiussi* does not specifically teach the use of adding a queue." Examiner, however, fails to address the other features of Applicants' independent claims that are not taught or suggested by *Chiussi*. *Hughes* is provided solely to support a teaching of addition of a queue. However, *Hughes* also does not teach or suggest the other features of Applicants' independent claims. Thus, Examiner fails to provide a reference or combination of references to support the rejection of several of the features recited by Applicants' independent Claims 1 and 9. These claims and all claims dependent thereon are therefore allowable over the references.

The sections of *Hughes* recited by Examiner do not actually teach or suggest the above features of Applicants' claims. *Hughes* generally provides a method for "scheduling when each of a plurality of virtual connections supported by a transmit device will be service by the transmit device," where "virtual connections with faster transfer rates are scheduled using higher granularity calendars, while ... slower transfer rates ... lower granularity calendars" (Abstract). A review of the cited sections reveals the following features: (1) scheduling the service time of a virtual connection based on the transfer rate of the connection (col. 3, ll 25-33); scheduling by placing the virtual connection in a linked list that corresponds to a cell slot and "each entry in

each calendar contains a head pointer and a tail pointer..." (col. 6, ll 30-50); "during cell slots in which the service queue associated with the highest granularity schedule is empty, ... services the virtual connection at the head of the service queue associated with the lower granularity schedule ... less likely to cause cell jitter..." (col. 9-10, ll 50-3); scheduling the first transaction using high-granularity calendar ... and the second transaction using schedule low granularity calendar..." (col. 12, ll 56-65); and using the scheduling table with the highest processing granularity because it is less likely for scheduling conflicts to occur. (col. 14, ll 10-21).

Nothing within these sections teach or even remotely suggest the method of selecting a next calendar position to place a queue. It is unclear to Applicants how or why Examiner selected found those sections of *Hughes* to be suggestive of features of Applicants' claimed invention. One skilled in the art would not find any of the above sections of *Hughes* to be suggestive of a mechanism and/or a specific method of selecting a calendar position to avoid a source from being queued too early in a time-based calendar.

Examiner's appears to have mischaracterize what is taught by *Chiussi* and *Hughes*. This mischaracterization of the two references is further magnified by the conclusions reached by Examiner, who states that combining the teachings "would have been obvious ... because Hughes method of adding new queues to the correct calendar would make Chussi's (*sic*) calendar system more adaptable and efficient." While this statement may be true, it also shows that the combination touted by Examiner is inherently different and not suggestive of the system/features provided by Applicants' claims.

Independent method claims 2 and 10 each provide a series of steps, including:

determining whether a new position ... is earlier than a previously calculated new position ...; if the new position ... is earlier ..., using the previously calculated new position; and, if the previously calculated new position is not earlier ... using the position which would be assigned (Claim 2); and

identifying a second location whereat the queue would have been re-attached had it not gone empty; ...if ... queue is not empty, identifying a current location ...; correlating the current location of the time pointer and the second location; and selecting a location which is not earlier than the second location to re-attach the queue (Claim 10).

Examiner again misconstrues and/or mischaracterizes what is taught by *Chiussi* and *Hughes* with respect to the features recited by the independent method claims. For example, col. 4, lines 53-57 and col. 15, lines 19-50 of *Hughes* do not teach or suggest the above determining step of Applicants' claims. The features provided by col. 4, lines 53-57 and col. 15, lines 19-50 were described above. Both references are devoid of any step that involves (1) determining whether a current new position is earlier than a previously calculated position and/or (2) identifying a second location ... and selecting a location which is not earlier than the second location.

Further, col. 10, lines 46-55 does not teach or suggest using a previously calculated new position under the specific scenarios described by Applicants' claims. That is, that section provides no selection from among two possible positions within the calendar. Rather, col. 10, lines 46-55 describes utilizing the "calendar entry that corresponds to the new desired service time value" without consideration of any previously calculated time value. Col. 11, lines 44-48 also does not teach or suggest selecting a location that is not earlier than the second location. Rather, that section states: "when connection queue 20-I is empty ..., the timestamp of connection i is the timestamp of the last transmitted packet of connection i." This section of *Hughes* provides an implementation involving the precise problem overcome by Applicants' claimed invention. That is, *Hughes* fails to prevent the early re-scheduling of queues (which is described in Applicants' background), and thus *Hughes* implements the very limitation of the prior art that Applicants' invention is designed to eliminate.

Given the above reasons, it is clear that the combination of references does not suggest key features of Applicants' invention. One skilled in the art would not find Applicants' invention unpatentable over the combination of references, and the claims are therefore allowable over the combination.

CONCLUSION

Applicants have diligently responded to the Office Action by amending the claims to clarify features within specific claims. Applicants have also provided arguments that show why the claims are allowable over the references and combinations thereof. Since the amendments overcome the §103 rejections, Applicants, respectfully request issuance of a Notice of Allowance for all claims now pending.

Applicants further respectfully request the Examiner contact the undersigned attorney of record at 512.343.6116 if such would further or expedite the prosecution of the present Application.

Respectfully submitted,



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